APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,894	01/18/2000	ANIL K. AGARWAL	A 6930	5628

7590   06/23/2004

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EXAMINER
NGUYEN, STEVEN H D

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 06/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 April 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 12-39* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 12-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment filed on 9/15/2003. Claims 4, 10-11 have been

withdrew and claims 1-3, 5-9 and 12-39 are pending in the application.

Please clarify if the claim 4 is canceled or not. If the claims are canceled. Please cancel

them. Do not use the term withdraw because it only use for restriction and selection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

3. Claims 12-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Grossman

(USP 5835730).

Grossman discloses an arrangement of signals in a cell/packet frame ATM cells; frame

relay packets and Internet packets with compressed header comprising a first number of bytes

comprising a table index "index coding" representing an original header portion comprising a

second number of bytes, said first number "two bytes" being less than said second number "four

bytes"; and a payload portion wherein said first number comprises two octets and said second

number comprises four octets (Col, 2, lines 50 to col. 2, lines 67, lines Col 6, lines 5-11, 24-26

and col. 7, lines 1-31).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6.   Claims 1, 4-9, 12-28, 30, 32 and 37-39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Raychaudhuri (USP 5684791) in view of Grossman (USP 5835730).

Raychaudhuri discloses a communication system for efficiently transmitting information

signals in discrete cell/packets comprise ATM cells, frame relay packets and Internet packets,

said system comprising at least two local area networks that are connected by a wireless

communication link, each local area network comprising a switch for providing a plurality of

cell/packets, each cell/packet comprising a HEC header and a payload; an interface for

connecting said switch to said wireless communication link (Figs 1 and 2 discloses a ATM

network used to link two wireless local network); furthermore, an interface includes a

WATM/ATM header conversion (Fig 2, Ref 22 for translating standard ATM header into

compressed header and combined compressed header with payload, then generating a wireless

ATM frame); said interface comprising means for discriminating each cell/packet in said

plurality of cell/packets; means for detecting a header in each of said cell/packets and for

separating said header from payload; means for compressing said separated header; and means

for combining said compressed header with said payload to form compressed header cells (Fig 2

discloses separating the header and payload of the received cell; the header will be compressed

into 2 octets to translate ATM header into compressed ATM header and merging the compressed

header with payload and generating a frame which includes frame header, compressed header,

payload and CRC fields for transmitting onto wireless; See col. 2, lines 51-61; col. 5, lines 7-44);

a frame assembler for assembling said compressed header cells into a frame; and means for

transmitting said assembled frame (Fig 3a) and means for receiving said transmitted frames

frame from said wireless communication link; and a frame disassembler for disassembling said

frames into a plurality of compressed header cell/packets and said interface further comprises

means for discriminating each compressed header cell in said plurality of compressed header

cells; means for detecting a header in each of said compressed header cells and for separating

said header from payload; means for decompressing said separated header; and means for

combining said decompressed header with said payload to form cell/packets (Fig 2 for receiving

and transmitting the wireless frame; generating ATM compressed header cell/standard cell

between ref 20 and 43; See col. 2, lines 51-61; col. 5, lines 7-44). However, Raychaudhuri fails

to disclose a method and system for a compressing/decompressing a header by using a lookup

table for mapping between index coding with VPI/VCI. However, in the same field of endeavor,

Grossman discloses a method and system for a compressing/decompressing a header by using a lookup table for mapping between index coding with VPI/VCI wherein index coding comprising two bytes and VPI/VCI comprising four bytes (Col, 2, lines 50 to col. 2, lines 67, lines Col 6, lines 5-11, 24-26 and col. 7, lines 1-31).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a compressing/decompressing header by using a lookup table for mapping between index coding with VPI/VCI wherein index coding comprising two bytes and VPI/VCI comprising four bytes as disclosed by Grossman into Raychaudhuri. the motivation would have been to reduce the overhead and increase throughput of the wireless interface.

7.   Claim 2-3 rejected under 35 U.S.C. 103(a) as being unpatentable over Raychaudhuri and Grossman as applied to claim 1 above, and further in view of Pirez (USP 5572548).

Raychaudhuri and Grossman fail to fully disclose the claimed invention. in the same field of endeavor, Pirez discloses encoding means for encoding said assembled frame (Fig 3, Ref 66) and an interleaver for interleaving a plurality of said assembled frame (Fig 3, Ref 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a QPSK encoder and interleaver for encoding/interleaving frames as disclosed by Pirez's system into the system of Raychaudhuri and Grossman. The motivation would have been to reduce the overhead and increase throughput of the wireless interface.

8.   Claims 29, 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raychaudhuri and Grossman as applied to claim 27 above, and further in view of Milway (USP 6122279).

Raychaudhuri and Grossman disclose hashing in translation header. In the same field of endeavor, Milway discloses comparing step comprises at least one of hashing and table look-up techniques and header decompression table has H1 entries, wherein H = 2n, wherein n <=16 (Fig 5 for translating old header into new header for routing and table has 2 power 16 because VCI has 16 bit).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a hashing method for translating old header into a new header as disclosed by Milway into Raychaudhuri and Grossman. The motivation would have been to reduce the routing delay.

9.   Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raychaudhuri and Grossman as applied to claim 27 above, and further in view of Miyake (USP 5271010).

Raychaudhuri and Grossman do not fully disclose the claimed invention. In the same field of endeavor, Miyake discloses said transmission step further comprises generating an input entry for a compression table and generating an entry for a decompression table and transmitting said decompression table entry for input into said decompression table; said entry is transmitted in a cell; said entry is created and sent ahead of a user cell (Fig 11, an entry is transmitted within cell and in front of the user cell wherein the table includes these routing tag).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply a routing tag for routing the ATM to its destination as disclosed by Miyake into Raychaudhuri and Grossman. The motivation would have been to prevent a data loss.

Conclusion

10.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Mc Tiffin (USP 5406550) discloses a method and system for mapping CDMA code and

VPI/VCI in the lookup table for using to compress/decompress the ATM header.

Ueno (USP 5553069) discloses a method and system for mapping frequency and

VPI/VCI in the lookup table for using to compress/decompress the ATM header.

Penners (USP 5406550) discloses a method and system for mapping CDMA code and

address in the lookup table for using to compress/decompress the packet header.

Tani (WO 9716006) discloses a method and system for mapping CDMA code and

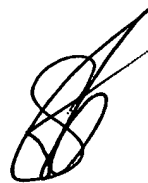VPI/VCI in the lookup table for using to compress/decompress the ATM header.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848.

The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven HD Nguyen
Primary Examiner
Art Unit 2665
6/21/04